AMENDMENT TO THE CLAIMS

1. (currently amended) A method for determining a word entered using a reduced keypad, where each of one or more keys of the reduced keypad is mapped to a plurality of letters, the method comprising:

receiving key input corresponding to the entered word and at least one of a left context and a right context;

determining a list of possible words corresponding to the key input for the entered word, wherein each listed word is in a vocabulary or previously entered into a cache; ~~and~~

using a language model comprising probability values corresponding to sequences of word N-grams of a natural language to rank the listed words based on ~~one or more of the~~ at least one of the left context and the right context of the key input;~~, wherein~~ and

updating the language model with additional training ~~is trained~~ using words entered into the cache.

2. (previously presented) The method of claim 1, wherein the reduced keypad is a numeric keypad.

3. (previously presented) The method of claim 1, wherein the key input has at least the left context, and the word corresponding to the key input is determined based in part on the left context of the key input.

4. (previously presented) The method of claim 1, wherein the key input has at least the right context, and the word corresponding to the key input is determined based in part on the right context of the key input.

5. (previously presented) The method of claim 1, wherein the key input has both the left context and the right context, and the word corresponding to the key input is determined based both on the left context and the right context of the key input.

6. (previously presented) The method of claim 1, wherein using the language model comprises using a word n-gram model.

7. (original) The method of claim 6, wherein using the n-gram model comprises using a bigram model.

8. (currently amended) The method of claim 1, wherein updating ~~using~~ the language model further comprises using a cache model.

9. (original) The method of claim 1, wherein the language model comprises a compressed language model.

10. (previously presented) The method of claim 1, wherein the key input has at least the left context, and wherein the word corresponding to the key input is determined based in part on the left context of the key input, and wherein using the language model comprises using a bigram model as the language model, comprising the steps:

for each listed word determining a probability of the word given the left context, and adding the word and the probability of the word to an array of word-probability pairs; and

sorting the array of word-probability pairs in decreasing order of probability.

11. (currently amended) The method of claim 10, wherein updating ~~using~~ the language model comprises using a cache model in addition to using the bigram model, such that the probability of

the word is determined given the left context and the words entered in the cache.

12. (original) The method of claim 10, wherein using the bigram model further comprises:

for each word in the vocabulary that is consistent with the key input as an initial part of the word, determining a probability of the word given the left context, and, upon determining that the probability is greater than a greatest probability so far determined, setting the greatest probability to the probability and a greatest probability word associated with the greatest probability to the word;

upon determining that the greatest probability is at least a number of times greater than a word of a first word-probability pair of the array of word-probability and the greatest probability as a new first word-probability pair before the first word-probability pair within the array.

13. (currently amended) The method of claim 12, wherein updating ~~using~~ the language model comprises using a cache model in addition to using the bigram model, such that the probability of the word is determined given the left context and words entered in the cache.

14. (previously presented) The method of claim 1, wherein the key input has both the left context and the right context and has a plurality of number sequences where each sequence corresponds to a word, the plurality of words corresponding to the key input determined by using the language model based in part on both the left context and the right context of the key input.

15. (original) The method of claim 1, wherein the language model comprises a compressed language model, the compressed language model compressed by performing a method comprising:

smoothing an uncompressed language model; and,

pruning the uncompressed language model to yield the compressed language model.

16. (original) The method of claim 15, wherein pruning the uncompressed language model comprises using one of: count-cutoffs approach, a Rosenfeld pruning approach, and a Stolcke pruning approach.

17. (original) The method of claim 15, wherein pruning the uncompressed language model comprises determining a normalization factor for each word in the uncompressed model only prior to pruning.

18. (original) The method of claim 15, wherein pruning the uncompressed language model accounts for ambiguous words in the uncompressed model.

19. (original) The method of claim 15, wherein pruning the uncompressed language model accounts for an effect of the pruning on key input accuracy.

20. (currently amended) The method of claim 1, and further comprising executing ~~wherein the method is performed by execution of~~ a computer program by a processor from a computer-readable medium to perform the steps of receiving key input, determining a list of possible words, and using a language model.

21. (currently amended) A computer-readable medium having instructions stored thereon for execution by a processor to

perform a method for determining a word entered using a reduced keypad, where each of one or more input keys of the reduced keypad is mapped to a plurality of letters, the method comprising:

receiving key input corresponding to the word and a left context;

for each word in a vocabulary that is consistent with the key input, determining an n-gram probability of the word given the left context, and adding the word and the n-gram of the word to an array of word-probability pairs, wherein the n-gram probabilities are stored in a language model trained at least in part on words entered into a cache, the language model comprising n-gram probabilities corresponding to sequences of words in a natural language;

determining the word corresponding to the key input as a word of a word-probability pair within the array of word-probability pairs having a greatest probability; and

updating the language model based on words previously entered into the cache.

22. (original) The medium of claim 21, wherein the reduced keypad is a numeric keypad.

23. (original) The medium of claim 21, wherein determining the word corresponding to the key input comprises:

sorting the array of word-probability pairs in decreasing order of probability; and

determining the word corresponding to the key input as a word of a first word-probability pair within the array of word-probability pairs.

24. (previously presented) The medium of claim 21, the method further initially comprising, for each word in the cache that is consistent with the key input, determining a probability of the word given the left context, and adding the word and the probability of the word to an array of word-probability pairs.

25. (original) The medium of claim 21 the method further comprising prior to determining the word corresponding to the key input:

for each word in the vocabulary that is consistent with the key input as an initial part of the word, determining a probability of the word given the left context, and, upon determining that the probability is greater than a greatest probability so far determined, setting the greatest probability to the probability and a greatest probability word associated with the greatest probability to the word;

upon determining that the greatest probability is significantly more likely than a word of a first word-probability pair of the array of word probability-pairs, adding the greatest probability word associated with the greatest probability and the greatest probability as a new first word-probability pair to the array.

26. (previously presented) The medium of claim 25 the method further initially comprising prior to determining the word corresponding to the key input, for each word in the cache that is consistent with the key input as an initial part of the word, determining a probability of the word given the left context, and, upon determining that the probability is greater than the greatest probability so far determined, setting the greatest

probability to the probability and a greatest probability word associated with the greatest probability to the word.

27. (currently amended) A method for determining a word entered using a reduced keypad, where each of one or more keys of the reduced keypad is mapped to a plurality of letters, the method comprising:

receiving key input corresponding to the word and at least one of a left context and a right context;

determining the word corresponding to the key input by using a compressed language model based on one or more of the at least one of the left context and the right context of the key input, wherein the language model comprises probabilities corresponding to N-gram word sequences of a natural language;

updating the language model with additional training using at least words previously entered in a cache; and

compressing the language model by performing the steps of:

smoothing the language model; and

pruning the language model to yield the compressed language model~~, wherein the language model is trained in part using words entered in a cache, and wherein the language model is compressed by performing the steps of:~~

~~smoothing the uncompressed language model; and,~~

~~pruning the uncompressed language model to yield the compressed language model~~.

28. (original) The method of claim 27, wherein the reduced keypad is a numeric keypad.

29. (original) The method of claim 27, wherein pruning the uncompressed language model comprises using one of: a count-

cutoffs approach, a Rosenfeld pruning approach, and a Stolcke pruning approach.

30. (original) The method of claim 27, wherein pruning the uncompressed language model comprises determining a normalization factor for each word in the uncompressed model only prior to pruning.

31. (original) The method of claim 27, wherein pruning the uncompressed language model accounts for ambiguous words in the uncompressed model.

32. (original) The method of claim 27, wherein pruning the uncompressed language model accounts for an effect of the pruning on key input accuracy.

33. (currently amended) The method of claim 27, and further comprising executing~~wherein the method is performed by execution of~~ a computer program by a processor from a computer-readable medium to perform the steps of receiving key input; training a language model using words entered in a cache; compressing the language model; and determining the word corresponding to the key input.

34. (currently amended) An apparatus comprising:

a plurality of keys, each of one or more of the keys mapped to a plurality of letters, the plurality of keys used to enter key input corresponding to a word and at least one of a left context and a right context; and,

a word-determining logic designed to construct a list of possible words corresponding to the entered word and ranking the listed words to determine the word corresponding to the key input by using a language

model based on one or more of the at least one of the left context and the right context of the key input, wherein the language model comprises N-gram probability values corresponding to sequences of words in a natural language, and wherein the language model is updated ~~further~~ based on words previously entered into a cache by a user.

35. (original) The apparatus of claim 34, further comprising a display on which the at least one of the left context and the right context, and the word corresponding to the key input, are displayed.

36. (original) The apparatus of claim 34, wherein the apparatus is a telephone.

37. (original) The apparatus of claim 36, wherein the apparatus is a mobile telephone.

38. (original) The apparatus of claim 36, wherein the apparatus is one of: a cellular telephone, a corded telephone, a cordless telephone, a digital telephone, and a radio telephone.

39. (original) The apparatus of claim 34, wherein the apparatus is one of: a pager, a desktop computer, a laptop computer, a handheld device, a personal-digital assistance (PDA) device, and a remote control device.

40. (currently amended) The apparatus of claim 34, and further comprising a computer-readable medium that stores ~~wherein~~ the word-determining logic comprising~~comprises~~ a computer program ~~stored on a computer-readable medium~~ for execution by a processor.

BEST AVAILABLE COPY

41. (previously presented) The apparatus of claim 34, wherein the key input has at least the left context, and the word corresponding to the key input is determined by the word-determining logic by training the language model based in part on the left context of the key input.

42. (previously presented) The apparatus of claim 34, wherein the key input has at least the right context, and the word corresponding to the key input is determined by the word-determining logic by training the language model based in part on the right context of the key input.

43. (previously presented) The apparatus of claim 34, wherein the key input has both the left context and the right context, and the word corresponding to the key input is determined by the word-determining logic by training the language model based in part on both the left context and the right context of the key input.

44. (currently amended) The apparatus of claim 34, wherein the word-determining logic updates the language model using~~uses~~ a cache model.